



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/047,733	10/26/2001	Karl Shubert	10004050-1	5991

7590 12/05/2003

AGILENT TECHNOLOGIES
Legal Department, 51U-PD
Intellectual Property Administration
P.O. Box 58043
Santa Clara, CA 95052-8043

EXAMINER

HAVAN, THU THAO

ART UNIT	PAPER NUMBER
----------	--------------

2672

2

DATE MAILED: 12/05/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/047,733

Applicant(s)

SHUBERT ET AL.

Examiner

Thu-Thao Havan

Art Unit

2672

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 26 October 2001.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-20 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. §§ 119 and 120

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 13) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.
- a) ☐ The translation of the foreign language provisional application has been received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Drawings

This application has been filed with informal drawings which are acceptable for examination purposes only. Formal drawings will be required when the application is allowed.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims **1-20** are rejected under 35 U.S.C. 103(a) as being unpatentable over Mark, Jr (US patent no. 4,63,533) in view of Ishihara et al. (US patent no. 5,821,537).

Re claim **1**, Mark teaches a method for graphically presenting multiple signals (fig. 1) comprising the following steps, separately representing on a display a signal for each measured frequency channel (col. 3, lines 11-28), aligning center channel frequencies for all the representations of the signals relative to a single position on a first axis (col. 4, lines 24-45), and indicating for all the representations of the signals, amplitude relative to a second axis (col. 4, line 55 to col. 6, line 23). In other words, Mark discloses a display of eddy current test data from signals produced by an eddy current detector which is supplied with an alternating current signal composed of alternating currents at several different frequencies, the detector signals including a respective signal associated with each current frequency and varying in amplitude and

in phase relative to its associated alternating current as the detector is displaced relative to a test body, the invention being implemented by: generating, from each detector signal, a data signal representing the detector signal component in phase with the associated alternating current and a data signal representing the detector signal component in quadrature with the associated alternating current; storing a representation of each data signal; and supplying the representation of each data signal to a display device for producing a first display composed of visible representations of all data signals along parallel axes, with each axis being associated with a respective data signal and being representative of the movement of the detector relative to the test body.

Mark *fails* to explicitly teach as claimed superimposing representations of the signals. Ishihara, on the other hand, specifically teaches superimposing representations of the signals (col. 11, line 62 to col. 12, line 34; figs. 5-7 and 13). He discloses the overlap in spectrums shown in figure 6 has been enlarged. In that the oscillation wavelength is noted along the horizontal axis while the derivative value of the change in absorption intensity is noted along the vertical axis in this graph. Further, at the same time, the reference cell was filled with CH.sub.4 alone at Torr and measurements were carried out. In figure 13, spectrum R for CH.sub.4 alone was aligned along the horizontal axis for comparison to the aforementioned derivative absorption spectrums. Identification was carried out by confirming the coincidence of the position (wavelength) of the peak obtained by measuring the CH.sub.4 alone and the position of the peak obtained by measuring the gas to be measured. Additionally, it

is noted here that spectrum R which was obtained by measuring CH.sub.4 alone is displayed by compressing variation in absorption intensity and raising the base line. Therefore, having the combined teaching of Mark and Ishihara as a whole, one of ordinary skill in the art would have found it obvious to the display signals of Mark to have superimposing representations of the signals as claimed. Doing so would enable displaying various wavelengths overlapping each other (Ishihara: col. 11, line 62 to col. 12, line 34; fig. 5).

Re claims **2 and 10**, Ishihara discloses displaying a line, intersecting the single position on the first axis, that indicates the center channel frequency for all the representations of the signals (fig. 6). Figure 6 illustrated the claimed limitations.

Re claims **3-5 and 11-13**, Ishihara discloses displaying a mask that indicates when values for the signals are outside channel frequency limits and that indicates when values for the signals are outside channel amplitude limits, using margin from the mask as a tool to measure the quality of signals, counting mask hits as a tool to measure the quality of signals (col. 12, line 23 to col. 13, line 64). Ishihara discloses the pressure of the gas to be measured is large, namely in the range of 500 Torr or more, the width of the absorption peak becomes broad. Accordingly, the height of the absorption peak becomes small. Thus, in the case where the amount of an impurity which is the target of measurement is trace, when the pressure is too large, the peak broadens and resolution decreases. On the other hand, when the pressure of the gas to be measured is less than 500 Torr, the width of the absorption peaks becomes narrow accompanying the decrease in pressure (the absorption peak becomes higher).

This decrease in the width of the absorption peaks, however, is not without limits. In other words, the width approaches a fixed value unrelated to the pressure, that is to say, the Doppler limit, based on the Doppler effect. Accordingly, if pressure is reduced too low, the decrease in the width of the absorption peak becomes dulled, and its height becomes low. As a result, the sensitivity of detection decreases.

Re claims **6-8 and 14-16**, Mark discloses using pixel color/shades/shades of color to indicate how many representations of the signals overlap each pixel (col. 6, lines 12-19). In other word, Mark teaches an interactive color graphics display system to review eddy current test data in the form of strip charts. In that each waveform have a respectively different color for ease of identification.

Re claims **9 and 17-20**, the limitation of claims 9 and 17-20 are identical to claim 1 above. Therefore, claims 9 and 17-20 are treated with respect to grounds as set forth for claim 1 above.

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Stubbs, US patent no. 4,812,996

Goodwin et al., US patent no. 4,725,131

Eglit, US Patent No. 6,232,952

Brilman, US Patent No. 5,684,508

Art Unit: 2672

Inquiries

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Thu-Thao Havan whose telephone number is (703) 308-7062. The examiner can normally be reached on Monday to Thursday from 9:00-5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Michael Razavi can be reached on (703) 305-4713.

Any response to this action should be mailed to:

Commissioner of Patents and Trademarks

Washington, D.C. 20231

or faxed to:

(703) 872-9314 (for Technology Center 2600 only)

Hand-delivered responses should be brought to Crystal Park II, 2121 Crystal Drive, Arlington, VA, Sixth Floor (Receptionist).

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Technology Center 2600 Customer Service Office whose telephone number is (703) 306-0377.

Thu-Thao Havan
Art Unit: 2672
November 26, 2003



MICHAEL RAZAVI
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2600